



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,638	04/04/2001	Timothy B. Robinson	BUI1382.11	3819
57246	7590	09/07/2006	EXAMINER	
BRAKE HUGHES PLC c/o PORTFOLIOIP P.O. BOX 52050 MINNEAPOLIS, MN 55402			JAGANNATHAN, MELANIE	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/825,638	ROBINSON ET AL. <i>58</i>	
	Examiner	Art Unit	
	Melanie Jagannathan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

- Examiner has considered Amendment after Non-Final mailed 6/12/2006.
- Claims 1-10 are pending.

Claim Objections

1. Claim 8 is objected to because of the following informalities: Examiner requests Applicant to change claim status to "currently amended" to reflect change from "block" switch to "blocking" switch as Examiner had required in previous office action. Examiner requests an underlining of change to amended language as well. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conroy et al. US 6,459,684 in view of Schwartzman et al. US 6,888,883.

Regarding claim 1, the claimed transceiver transmitting frames over a transmission medium in frame-based communication network is disclosed by Conroy et al. by ADSL system with ADSL transceiver (Figure 3A, element 300). The claimed providing a transceiver transmit path and transceiver receive path is disclosed by transmit path and receive path for ADSL terminal (Figure 6A). See column 5, lines 9-11, column 8, lines 27-29.

Conroy et al. discloses echo canceling in ADSL system. Conroy et al. does not disclose the claimed noise reduction, locating a blocking switch in transmit path, the blocking switch allowing transmit signal propagation when enabled, the claimed preventing both transmit signal propagation and circuit device noise coupling from transceiver transmit path to transceiver receive path when blocking switch is disabled and the claimed disabling the blocking switch when transceiver transmit path is not transmitting frames.

Schwartzman et al. discloses a device to reduce noise leakage from cable modem when cable modem is not actively transmitting and to properly terminate cable plant when cable modem is not in use to avoid unwanted reflections. See column 7, lines 5-20.

Schwartzman et al. discloses a cable modem (Figure 4A, element 400) with switching component (element 41) containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Conroy et al. with switching component of Schwartzman et al. One of ordinary skill in the art would have been motivated to do so to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission.

Regarding claim 2, Conroy et al. discloses a hybrid (element 620) connected to ADSL line by transformer to convert signals. See column 2, lines 33-51. Conroy et al. does not disclose the circuit device noise coupling from transceiver transmit path to receive path as also claimed in claim 6. Schwartzman et al. discloses a device to reduce noise leakage from cable modem when cable modem is not actively transmitting and to properly terminate cable plant when cable modem is not in use to avoid unwanted reflections. See column 7, lines 5-20.

Schwartzman et al. discloses a cable modem (Figure 4A, element 400) with switching component (element 41) containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. At

the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify hybrid of Conroy et al. with switching component of Schwartzman et al. One of ordinary skill in the art would have been motivated to do so to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission.

Regarding claim 3, Conroy et al. discloses all of the limitations of the claim except for the claimed block switching is located proximate to transmission medium. Schwartzman et al. discloses switching component containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. Switch component is used to prevent noise leakage from reaching upstream channel by alternating the opening and closing of the two switches depending on whether there is a signal burst. See column 8, lines 43-46. At the time the invention was made it would have been obvious to have block switching located proximate to transmission medium. One of ordinary skill in the art would be motivated to do this to prevent noise leakage from reaching upstream channel.

Regarding claims 4-5, the claimed transmission medium is a twisted pair wire which is a telephone line is disclosed by Conroy et al. by telephone line (Figure 1, element 11). See column 1, lines 36-45.

Regarding claim 6, the claimed switch apparatus for providing a transceiver transmitting frames over a transmission medium in a frame-based communications network, transceiver having a transceiver transmit path and receive path is disclosed by Conroy et al. by ADSL system with ADSL transceiver (Figure 3A, element 300) with transmit path and receive path for ADSL terminal (Figure 6A). See column 5, lines 9-11, column 8, lines 27-29.

Conroy et al. discloses echo canceling in ADSL system. Conroy et al. does not disclose the claimed noise reduction, locating a blocking switch in transmit path, the blocking switch allowing transmit signal propagation when enabled, the claimed preventing both transmit signal propagation and circuit device noise coupling from transceiver transmit path to transceiver receive path when blocking switch is disabled and the claimed disabling the blocking switch when transceiver transmit path is not transmitting frames.

Schwartzman et al. discloses a device to reduce noise leakage from cable modem when cable modem is not actively transmitting and to properly terminate cable plant when cable modem is not in use to avoid unwanted reflections. See column 7, lines 5-20.

Schwartzman et al. discloses a cable modem (Figure 4A, element 400) with switching component (element 41) containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. At

the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Conroy et al. with switching component of Schwartzman et al. One of ordinary skill in the art would have been motivated to do so to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission.

Regarding claim 7, Conroy et al. discloses a hybrid (element 620) connected to ADSL line by transformer to convert signals. See column 2, lines 33-51. Conroy et al. does not disclose the circuit device noise coupling from transceiver transmit path to receive path as also claimed in claim 6. Schwartzman et al. discloses a device to reduce noise leakage from cable modem when cable modem is not actively transmitting and to properly terminate cable plant when cable modem is not in use to avoid unwanted reflections. See column 7, lines 5-20.

Schwartzman et al. discloses a cable modem (Figure 4A, element 400) with switching component (element 41) containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify hybrid of Conroy et al. with switching component of Schwartzman et al. One of ordinary skill in the art would have been motivated to do so to reduce or eliminate noise leakage on an upstream channel to increase quality of upstream data transmission.

Regarding claim 8, Conroy et al. discloses all of the limitations of the claim except for the claimed output port of blocking switching is locatable proximate to transmission medium. Schwartzman et al. discloses switching component containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. Switch component is used to prevent noise leakage from reaching upstream channel by alternating the opening and closing of the two switches depending on whether there is a signal burst. See column 8, lines 43-46. At the time the invention was made it would have been obvious to modify Conroy et al. to have switching component located proximate to transmission medium of Schwartzman et al. One of ordinary skill in the art would be motivated to do this to prevent noise leakage from reaching upstream channel.

Regarding claims 9-10, the claimed transmission medium is a twisted pair wire which is a telephone line is disclosed by Conroy et al. by telephone line (Figure 1, element 11). See column 1, lines 36-45.

Response to Arguments

4. Applicant's arguments filed 6/12/2006 have been fully considered but they are not persuasive. Examiner appreciates detailed description of the prior art.

Applicant argues the teachings related to cable modems of Schwartzman are not related to the remote terminals of Conroy. Schwartzman is directed to noise leakage from an upstream transmitter and Conroy is directed to improving a quality of a receive signal.

Examiner respectfully disagrees. Schwartzman et al. discloses switching component containing a series switch (element 416) and shunt switch (element 418) for transmission of data from upstream transmitter (element 406) to upstream channel; the switches can be enabled or disabled through a control line (element 412) from upstream transmitter. See column 8, lines 11-36, lines 43-62. Switch component is used to prevent noise leakage from reaching upstream channel by alternating the opening and closing of the two switches depending on whether there is a signal burst. See column 8, lines 43-46. As Applicant also notes, Conroy does disclose benefit of canceling leakage of upstream signal into downstream receive signal path. The switching component of Schwartzman with the alternating opening and closing of the switches to prevent noise leakage would be useful in Conroy for helping any leakage of upstream signal. In light of the claim language, the rejection is proper.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 571-272-3163. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie Jagannathan *MJ*
Patent Examiner
Art Unit 2616
August 31, 2006



CHI PHAM
SUPERVISORY PATENT EXAMINER *q/s/b*